NASA DEVELOP National Program

Potential Project Ideas for the 2017 Spring Term (January 23 – March 31, 2017)
** These topics are not finalized and subject to change **

NASA Ames Research Center – Moffett Field, CA

- Lake Erie Water Resources II: Utilizing Hyperspectral and Satellite Imagery to Detect Harmful Algal Blooms and Monitor Water Quality in Lake Erie
- Chile Water Resources: Integrating Satellite Precipitation Data into Drought Monitoring for Enhanced Agricultural Management in Chile

NASA Goddard Space Flight Center – Greenbelt, MD

- North Carolina Water Resources II: Utilizing NASA Earth Observations and Hydrological Modeling to Monitor Nutrient Levels in Falls Lake, North Carolina for Improved Water Quality Management
- Chesapeake Bay Agriculture: Using NASA Earth Observations to Map Winter Cover Crop Conservation Performance in the Chesapeake Bay Watershed
- New York Ecological Forecasting: Utilizing NASA Earth Observations to Effectively Track and Predict Prevalence of Lyme and Other Tick-borne Disease at the United States Military Academy (USMA) at West Point and Surrounding West Point Community
- New York Ecological Forecasting: Mapping Land Use and Monitoring Land Use Change for Conservation Management on Private Lands in Adirondack Park

NASA Jet Propulsion Laboratory – Pasadena, CA

- Mississippi Water Resources: Synthesizing Trends in Water Quality Parameters that Impact Oyster Reef Health in the Mississippi Sound Using NASA Earth Observations (collaboration with Langley)
- Santa Monica Ecological Forecasting: Analyzing Changes in Oak Woodland Extent, Health and Density in the Santa Monica Mountains, California Using NASA Earth Observations

NASA Langley Research Center – Hampton, VA

- Glacier National Park Ecological Forecasting II: Utilizing NASA Earth Observations to Correlate Landscape Disturbances to Effects of a Changing Climate across Glacier National Park
- Mississippi Water Resources: Synthesizing Trends in Water Quality Parameters that Impact Oyster Reef Health in the Mississippi Sound Using NASA Earth Observations (collaboration with JPL)
- Rwanda Ecological Forecasting: Mapping the Extent and Health of Wetlands in Rwanda for Sustainable Development Goal (SDG) Monitoring

NASA Marshall Space Flight Center – Huntsville, AL

- Mississippi River Basin Disasters II: Creating a Near Real-Time Automated Toolbox to Enhance Flood Monitoring throughout the Mississippi River Basin
- Mekong River Basin Water Resources: Assessing the Use of NASA Precipitation and Land Surface Products to Develop an Experimental Operational Hydrologic Model for the Mekong River Basin
- Chaco Canyon Cross-Cutting II: Using High-Resolution Remotely Sensed Data to Identify Chacoan Community Signatures and Assess the Accuracy of Associated Anthropogenic Risks
- Alabama Agriculture: Analyzing and Assessing Drought Conditions for Agricultural Crops across Alabama

NOAA National Centers for Environmental Information – Asheville, NC
- Missouri River Basin Climate: Utilizing NASA Earth Observations and NOAA Climate Data Records to Determine the Spatial and Temporal Trends of Climate Variables in the Missouri River Basin to Better Understand Water Resource Management
- Coastal Disasters: Utilizing NASA Earth Observations, NOAA Climate Data Records, and International Space Station Data to Enhance Methods of Measuring and Tracking Cyclones

BLM at Idaho State University – Pocatello, ID
- Southeastern Idaho Water Resources II: Leveraging NASA Earth Observations to Identify Existing Surface Water Features and Improve Water Management and Resource Allocation in East Idaho
- Idaho Ecological Forecasting: Modeling Special Plant Species Distribution Utilizing NASA Earth Observations to Identify Suitable Habitat and Controls of Population Presence/Absence

Maricopa County Department of Public Health and Arizona State University – Tempe, AZ
- Phoenix Health & Air Quality: Utilizing NASA Earth Observations to Reduce the Impact of Extreme Heat on Transit Riders in Phoenix, AZ

Mobile County Health Department – Mobile, AL
- Arizona Water Resources II: Using NASA Earth Observations to Assist the National Park Service in Assessing Snow Cover Distribution and Persistence Changes in the Sky Islands
- Coastal Alabama Health & Air Quality: Enhancing the Mobile County Health Department's Heat Risk Warning System Through the use of NASA's Earth Observations

University of Georgia – Athens, GA
- Costa Rica Water Resources II: Monitoring Drought and Water Balance in the Guanacaste Province to Enhance Decision Making and Response Planning in Costa Rica
- Eastern India Ecological Forecasting II: A Multi-Sensor Approach to Enhance the Prediction of Mangrove Biophysical Characteristics in Chilika Lagoon and Bhitarkanika Wildlife Sanctuary, Odisha, India

USGS at Colorado State University – Fort Collins, CO
- Nez Perce-Clearwater National Forest Agriculture: Quantification of Dead Biomass in Nez Perce National Forest Using Lidar and Landsat to Assess the Feasibility of Beetle Killed Wood as a Bioenergy Feedstock
- Arizona Water Resources: Assessing Tamarisk Invasion Risk in Riparian Areas Using Landsat 8 for Riparian Restoration Efforts

Wise County Clerk of Court's Office – Wise, VA
- Texas Health & Air Quality: Utilizing NASA Earth Observations to Assess the Impact of Gas Flare Emissions in South Texas
- Virginia Health & Air Quality: Utilizing NASA Earth Observations to Identify Changes in Point-Source Emissions in Southwest Virginia
- Wyoming Ecological Forecasting: Utilizing NASA Earth Observations to Monitor Land Cover Change in Yellowstone National Park
- Wyoming Health & Air Quality: Utilizing NASA Earth Observations to Detect Changes in Light Pollution in Teton National Park